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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 859,655	05 17 2001	Ilan Golecki	050-98-044	3899

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EXAMINER

GOUDREAU, GEORGE A

ART UNIT	PAPER NUMBER
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1763

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DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09-859,655

Applicant(s)

Gothen

Examiner

George Couclrean

Group Art Unit

1763

mk-3

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE

3

MONTH(S) FROM THE MAILING DATE

OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 5-01-06, - papers # 1-2
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-20 is/are pending in the application.
- Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1-20 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

References Cited

Notice of Draftsperson's Patent Drawing Review, PTO-946

Other

Office Action Summary

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15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1, 5-7, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Efremow et. al. (2-1985').

Efremow et. al. disclose a process for forming trenches in the top surface of a diamond substrate (i.e.- a carbon based substrate) which is used to form a traveling wave tube. The process is comprised of the following steps:

-An multi-layer etch mask is formed onto the surface of the diamond substrate. The multi-layer etch mask is comprised of a stack of layers (i.e.-Ti / Au / Ti / Al / resist). The top Al layer and the over-lying photo resist layer of the multi-layer etch mask serves as the effective etch mask during the etching of the surface of the diamond substrate. (The photo resist layer is consumed during the etching of the diamond layer to leave behind the Al layer as the etch mask); and

-The diamond substrate is etched using IBAE step which employs an ambient atmosphere of NO₂ in combination with a Xe⁺ ion beam to etch the surface of the diamond substrate.

This is discussed on pages 416-418. This is shown in figures 1-9.

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17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 2-4, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Efremow et. al. as applied in paragraph 16 above.

Efremow et. al. fail as applied in paragraph 16 above fail to disclose the following aspects of applicant's claimed invention:

-the specific usage of a photo lithographic process which employs UV light to image the photo resist etch mask in the process taught above

It would have been obvious to one skilled in the art to use a UV photo lithographic process to pattern the photo resist layer in the process taught above in order to form an etch mask based upon the following. The usage of a UV photo lithographic process to pattern a photo resist layer in order to form an etch mask is conventional or at least well known in the semiconductor processing arts. (The examiner takes official notice in this regard.) Further, this simply represents the usage of an alternative, and at least equivalent means for forming an etch mask in the process taught above to the specific usage of other such means for forming an etch mask.

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19. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-The usage of the term "predetermined" in claims 1, and 5-6 is vague, and indefinite.; and

-The usage of the term "carbon-carbon work piece" is vague, and indefinite. (Does this term read on any carbon based workpiece? Does this term read on a carbon plate? Does this term only read upon a substrate comprised of woven carbon based fibers?)

20. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner George A. Goudreau whose telephone number is (703) -308-1915. The examiner can normally be reached on Monday through Friday from 9:30 to 6:00.

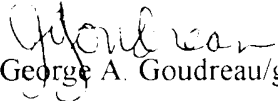
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Examiner Gregory Mills, can be reached on (703) -308-1633. The appropriate fax phone number

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) -308-0661.


George A. Goudreau/gag

Primary Examiner

AU 1763